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DOCKET NO.: PHNL 010002 CHENT NO.: PHIL06-10002 **PATENT**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In respondication of

CHRISTIAN HENTSCHEL, ET AL.

Serial No.

09/759,036

Filed

January 11, 2001

For

METHOD OF AND SYSTEM FOR RUNNING AN ALGORITHM

Group No.

2194

Examiner

Van H. Nguyen

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

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Fees partiant to the Consolidated Appropriations Act, 2005 (H.R. 4818). FEE TRANSMITTAL For FY 2005		Application Number	Application Number 09/759,036		
		Filing Date	January 11, 2001	January 11, 2001	
		First Named Invent	or Christian Hentsch	Christian Hentschel	
		Examiner Name	Van H. Nguyen		
Applicant claims small entity status. See 37 CFR 1.27		Art Unit	2194		
TOTAL AMOUNT OF PAYMENT (\$) 500.00	Attorney Docket No		HIL06-10002)	
METHOD OF PAYMENT (check all that apply)					
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Design 200	100 100	50	130 65		
Plant 200	100 300	150	160 80		
Reissue 300	150 500	250	600 300		
Provisional 200	100	0	0 0		
2. EXCESS CLAIM FEES Fee Description Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent Each independent claims Each claim over 3 or, for Reissues, each independent claim more than in the original patent Multiple dependent claims Total Claims Extra Claims Fee (\$) Fee Paid (\$) HP = highest number of total claims paid for, if greater than 20 Indep. Claims Extra Claims Fee (\$) Fee Paid (\$)					
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Non-English Specification, \$130 fee (no small entity discount)					
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Christian Hentschel, et al.

Serial No.:

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MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

APPEAL BRIEF

The Appellants have appealed to the Board of Patent Appeals and Interferences from the decision of the Examiner dated June 15, 2005, finally rejecting Claims 1-20. The Appellants filed a Notice of Appeal on September 15, 2005, which was received by the U.S. Patent and Trademark Office on September 19, 2005. The Appellants respectfully submit this brief on appeal with the appropriate statutory fee.

REAL PARTY IN INTEREST

This application is currently owned by U.S. Philips Corporation as indicated by an assignment recorded on May 7, 2001 in the Assignment Records of the U.S. Patent and Trademark Office at Reel 011775, Frame 0994.

RELATED APPEALS AND INTERFERENCES

There are no known appeals or interferences that will directly affect, be directly affected by, or have a bearing on the Board's decision in this pending appeal.

STATUS OF CLAIMS

Claims 1-20 have been rejected pursuant to the final Office Action dated June 15, 2005.

Claims 1-20 are presented for appeal. A copy of Claims 1-20 is provided in Appendix A.

STATUS OF AMENDMENTS

No amendments were submitted and refused entry after issuance of the final Office Action dated June 15, 2005.

SUMMARY OF CLAIMED SUBJECT MATTER

Regarding Claim 1, a method 100 of running an algorithm that has a first function and a second function includes requesting an algorithm resource by the algorithm to provide a plurality of output quality levels. (*Application, Page 1, Lines 1-24; Page 5, Line 10 – Page 6, Line 12*). The method 100 also includes determining that the first function provides a first plurality of quality levels and the second function provides a second plurality of quality levels. (*Application, Page 1, Lines 25-26; Page 6, Line 24 – Page 9, Line 8*). The method 100 further includes allocating a budget to the algorithm to enable operating the algorithm at an output quality level, where the output quality level is one of the plurality of output quality levels. (*Application, Page 1, Lines 27-29; Page 9, Line 9 – Page 10, Line 2*). In addition, the method 100 includes assigning a first quality level of the first plurality of quality levels to the first function and assigning a second quality level of the second plurality of quality levels to the second function based on the output quality level. (*Application, Page 2, Lines 1-3; Page 10, Lines 3-29*).

Regarding Claim 9, a system 400 for running an algorithm that has a first function and a second function includes function means (404-406) conceived to contain the first function of the algorithm and the second function of the algorithm. (*Application, Page 11, Lines 7-12*). The system also includes lookup means (402, 408-410, 414-416) conceived to contain a plurality of output quality levels that can be provided by the algorithm, a first plurality of quality level settings of the first function, and a second plurality of quality level settings of the second function. (*Application, Page 11, Lines 3-23*). In addition, the system includes processing means (422-424, 430-432) for allocating a budget to the algorithm to enable operation of the algorithm at an output quality level,

where the output quality level is one of the plurality of output quality levels. (*Application, Page 12, Lines 5-23*). The processing means (422-424, 430-432) are also for assigning a first quality level of the first plurality of quality levels to the first function and assigning a second quality level of the second plurality of quality levels to the second function based on the output quality level. (*Application, Page 12, Lines 5-23*). The function means (404-406) may include one or more memories. (*Application, Page 11, Lines 7-12*). The lookup means (402, 408-410, 414-416) may include one or more lookup tables in one or more memories, software, or logical building blocks implemented in silicon. (*Application, Page 11, Lines 3-23, Page 12, Lines 17-20*). The processing means (422-424, 430-432) may include central processing units (CPUs) and co-processors, such as CPUs or co-processors executing software in a computer. (*Application, Page 12, Lines 5-23*).

Regarding Claim 18, a system 400 for running an algorithm includes at least one memory (402-410, 414-416) capable of storing a first function of the algorithm, a second function of the algorithm, a plurality of output quality levels provided by the algorithm, a first plurality of quality level settings for the first function, and a second plurality of quality level settings for the second function. (Application, Page 11, Lines 3-18). The system 400 also includes at least one processor (422-424, 430-432) capable of allocating a budget to the algorithm to enable operation of the algorithm at a selected output quality level, where the selected output quality level is one of the plurality of output quality levels. (Application, Page 12, Lines 5-23). The at least one processor (422-424, 430-432) is also capable of assigning a first quality level of the first plurality of quality levels to the first function and assigning a second quality level of the second plurality of quality levels to the second function based on the selected output quality level. (Application, Page 12, Lines

GROUNDS OF REJECTION

1. Claims 1-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,151,018 to Webb et al. ("Webb") in view of Applicant Admitted Prior Art ("APA").

ARGUMENT

I. GROUND OF REJECTION #1

The rejection of Claims 1-20 under 35 U.S.C. § 103(a) is improper and should be withdrawn.

A. OVERVIEW

Claims 1-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,151,018 to Webb et al. ("Webb") in view of Applicant Admitted Prior Art ("APA").

B. STANDARD

In ex parte examination of patent applications, the Patent Office bears the burden of establishing a prima facie case of obviousness. (MPEP § 2142; In re Fritch, 972 F.2d 1260, 1262, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992)). The initial burden of establishing a prima facie basis to deny patentability to a claimed invention is always upon the Patent Office. (MPEP § 2142; In re Oetiker, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984)). Only when a prima facie case of obviousness

is established does the burden shift to the Appellants to produce evidence of nonobviousness. (MPEP § 2142; In re Oetiker, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993)). If the Patent Office does not produce a prima facie case of unpatentability, then without more the Appellants are entitled to grant of a patent. (In re Oetiker, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); In re Grabiak, 769 F.2d 729, 733, 226 U.S.P.Q. 870, 873 (Fed. Cir. 1985)).

A prima facie case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. (In re Bell, 991 F. 2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993)). To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, and not based on the Appellants' disclosure. (MPEP § 2142).

C. THE WEBB REFERENCE

Webb recites an apparatus, method, and system for improving a picture produced from a broadcast video signal by encoding "picture parameter correction information" into the vertical blanking interval of the video signal. (Abstract). Prior to transmission, images are displayed to a

colorist, and the colorist uses a GUI 20 to adjust settings (clarity, noise reduction, intensity, color, and black level) of the images. (Figure 2; Col. 4, Lines 1-6). The selected settings are then processed using a best fit algorithm to identify a "preset" that most closely matches the settings of the colorist. (Col. 4, Lines 6-11). As an example, there could be 256 different presets identified by an 8-bit value. (Col. 3, Lines 42-47). The identified preset is then transmitted with the images and used by a decoder to decode and display the images. (Col. 4, Lines 11-17; Col. 5, Lines 22-35). For example, the 8-bit value may be provided to a look-up-table (LUT) 71, which outputs five "correction values" used to adjust the images before display. (Col. 5, Line 36 – Col. 6, Line 34).

D. THE APA REFERENCE

APA recites a decoding algorithm that includes multiple functions, such as low pass filtering and upsampling. (Application, Page 1, Lines 13-14). A CPU load is determined for each function. (Application, Page 1, Lines 14-16). Using the CPU load for each function, the functions from the algorithm that can be performed using an "allowed CPU load" are identified. (Application, Page 1, Lines 16-17). A budget for each function is then individually allocated to each function. (Application, Page 1, Lines 17-18).

E. <u>CLAIMS 1 AND 3-20</u>

Claim 1 recites a method of running an algorithm that has a first function and a second function, where the method includes:

requesting an algorithm resource by the algorithm to provide a

plurality of output quality levels,

determining that the first function provides a first plurality of quality levels and the second function provides a second plurality of quality levels,

allocating a budget to the algorithm to enable operating the algorithm at an output quality level, said output quality level being one of the plurality of output quality levels, and

assigning a first quality level of the first plurality of quality levels to the first function and assigning a second quality level of the second plurality of quality levels to the second function based on the output quality level.

The Examiner does not establish that the proposed *Webb-APA* combination discloses, teaches, or suggests all elements of Claim 1.

First, the Examiner acknowledges that Webb fails to teach "allocating a budget to the algorithm." (06/15/05 Office Action, Page 4, Third paragraph). The Examiner then asserts that APA discloses "allocating a budget to the algorithm" at page 1, lines 16-18. (06/15/05 Office Action, Page 4, Fourth paragraph).

The cited portion of APA does not disclose, teach, or suggest "allocating a budget to [an] algorithm to enable operating the algorithm at an output quality level," where the output quality level represents one of a "plurality of output quality levels" as recited in Claim 1. Rather, the cited portion of APA simply recites that a budget may be allocated to an individual function in an algorithm, where a determination is made that the individual function can be used based on a single "allowed CPU load." (Application, Page 1, Lines 16-18). APA expressly states that a budget is allocated to a function "individually," not to an algorithm formed from multiple functions. Also, APA says absolutely nothing about allocating a budget to an algorithm to "enable" the algorithm to operate at one of multiple "output quality levels." As a result, both Webb and APA fail to disclose, teach, or

suggest "allocating a budget to [an] algorithm to enable operating the algorithm at an output quality level," where the output quality level is "one of [a] plurality of output quality levels" as recited in Claim 1.

Second, the Examiner appears to treat the five settings (clarity, noise reduction, intensity, color, and black level) of *Webb* as anticipating the different "functions" of an algorithm recited in Claim 1. (06/15/05 Office Action, Page 4, First paragraph). Presumably, the different values of each setting are viewed by the Examiner as the different "quality levels" recited in Claim 1.

Claim 1 recites assigning one of multiple "quality levels" to a first function and assigning one of multiple "quality levels" to a second function "based on" an "output quality level" at which an algorithm is operated. *Webb* never discloses, teaches, or suggests assigning values to any of the five settings based on an "output quality level" at which an algorithm is operated.

Webb clearly recites that the values of the five different settings are selected by a user. The values selected by the user are then used to identify a "preset," which has pre-specified values for the five settings. Nothing in Webb indicates that the values selected by the user or the values associated with the preset are assigned based on an overall "output quality level" at which an algorithm is operated.

Webb also clearly recites that the preset is transmitted with the images to a decoder. The decoder uses the preset to retrieve the pre-specified values for the five settings from a look-up-table. Once again, the pre-specified values for the five settings are identified at the decoder of Webb using the preset, not an "output quality level" at which an algorithm is operated. Nothing in Webb indicates that the preset value represents an overall "output quality level" at which an algorithm is

operated.

It is possible that the Examiner is relying on the 8-bit preset of *Webb* as anticipating the "overall quality level" recited in Claim 1. However, *Webb* simply recites that the 8-bit preset is used as an index into a look-up-table. As noted above, *Webb* contains absolutely no mention that the 8-bit preset represents an overall "overall quality level" at which an algorithm operates.

For these reasons, the proposed *Webb-APA* combination fails to disclose, teach, or suggest the Appellants' invention as recited in Claim 1. As a result, the Examiner does not establish a *prima* facie case of obviousness against Claim 1 (and its dependent claims). For similar reasons, the Examiner does not establish a *prima facie* case of obviousness against Claims 9 and 18 (and their dependent claims).

Accordingly, the Appellants respectfully request that the § 103 rejection of Claims 1 and 3-20 be withdrawn and that Claims 1 and 3-20 be passed to allowance.

F. CLAIM 2

Claim 2 recites the method of Claim 1, and further includes:

determining that the first function, while providing the first quality level, can be operated at a plurality of levels of complexity.

The Examiner does not establish that the proposed *Webb-APA* combination discloses, teaches, or suggests all elements of Claim 2.

As noted above, the Examiner appears to treat the five settings (clarity, noise reduction, intensity, color, and black level) of *Webb* as anticipating the different "functions" of an algorithm

recited in Claim 1. (06/15/05 Office Action, Page 4, First paragraph). Again, this presumably means that the different values of each setting are viewed by the Examiner as the different "quality levels" recited in Claim 1.

Because of this, the Examiner must show that at least one of the five settings of *Webb* can be operated at multiple "levels of complexity" for a single value of that setting. For example, if the clarity setting has a value of "20," the Examiner must show that the clarity function may provide that quality level while operating "at a plurality of levels of complexity." The Examiner has not made this showing.

The Examiner cites column 3, lines 30-47 of Webb as disclosing these elements of Claim 2. (06/15/05 Office Action, Page 5, Section 13). However, this portion of Webb simply describes the GUI 20, reciting how the individual values for the settings may be set and how the presets may store specified combinations of values. This portion of Webb says absolutely nothing about a function that can be operated at different "levels of complexity," where the function provides a specified "quality level" at each of the "levels of complexity" as recited in Claim 2.

For these reasons, the proposed *Webb-APA* combination fails to disclose, teach, or suggest the Appellants' invention as recited in Claim 2. As a result, the Examiner does not establish a *prima* facie case of obviousness against Claim 2.

Accordingly, the Appellants respectfully request that the § 103 rejection of Claim 2 be withdrawn and that Claim 2 be passed to allowance.

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SUMMARY

The Appellants have demonstrated that the present invention as claimed is clearly distinguishable over the prior art cited of record. Therefore, the Appellants respectfully request the Board of Patent Appeals and Interferences to reverse the final rejection of the Examiner and instruct the Examiner to issue a notice of allowance of all claims.

The Commissioner is hereby authorized to charge any additional fees (including any extension of time fees) or credit any overpayments to Davis Munck Deposit Account No. 50-0208.

Respectfully submitted,

DAVIS MUNCK, P.C.

Date: 1014, 2005

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APPENDIX A

PENDING CLAIMS APPENDIX

1. A method of running an algorithm wherein the algorithm comprises a first function and a second function, the method comprising the steps of:

requesting an algorithm resource by the algorithm to provide a plurality of output quality levels.

determining that the first function provides a first plurality of quality levels and the second function provides a second plurality of quality levels,

allocating a budget to the algorithm to enable operating the algorithm at an output quality level, said output quality level being one of the plurality of output quality levels, and

assigning a first quality level of the first plurality of quality levels to the first function and assigning a second quality level of the second plurality of quality levels to the second function based on the output quality level.

- 2. The method of running an algorithm according to claim 1, further comprising determining that the first function, while providing the first quality level, can be operated at a plurality of levels of complexity.
- 3. The method of running an algorithm according to claim 1, further comprising the following steps:

operating the algorithm at the output quality level.

operating the first function at the first quality level while consuming a first amount of resources by the first function and operating the second function at the second quality level while consuming a second amount of resources by the second function.

- 4. The method of running an algorithm according to claim 3, further comprising operating the first function at a least complex level of the plurality of levels of complexity.
- 5. The method of running an algorithm according to claim 1, wherein the allocated budget is substantially equal to the requested algorithm resource.
- 6. The method of running an algorithm according to claim 3, wherein the first amount of resources in addition to the second amount of resources is substantially equal to the allocated budget.
- 7. The method of running an algorithm according to claim 1, further comprising determining a hardware platform operating said method to determine the algorithm resource and the plurality of output quality levels.

- 8. The method of running an algorithm according to claim 1, further comprising determining a software platform operating said method to determine the algorithm resource and the plurality of output quality levels.
- 9. A system for running an algorithm wherein the algorithm comprises a first function and a second function, the system comprising:

function means conceived to contain the first function of the algorithm and the second function of the algorithm;

lookup means conceived to contain a plurality of output quality levels that can be provided by the algorithm, a first plurality of quality level settings of the first function, and a second plurality of quality level settings of the second function; and

processing means for:

allocating a budget to the algorithm to enable operation of the algorithm at an output quality level, the output quality level being one of the plurality of output quality levels; and

assigning a first quality level of the first plurality of quality levels to the first function and assigning a second quality level of the second plurality of quality levels to the second function based on the output quality level.

- 10. The system for running an algorithm according to claim 9, wherein at least one output quality level of said plurality of output quality levels can be provided by the algorithm for at least one first quality level setting of said first plurality of quality level settings and at least one second quality level setting of said second plurality of quality level settings.
- 11. The system for running an algorithm according to claim 10, further comprising: a complexity means conceived to contain a plurality of levels of complexity of operation for said at least one first quality level setting.
- 12. The system for running an algorithm according to claim 9, further comprising a hardware configuration means conceived to contain a hardware platform configuration of the system to determine at least said plurality of output quality levels.
- 13. The system for running a algorithm according to claim 9, further comprising a software configuration means conceived to contain a software platform configuration of the system to determine at least said plurality of output quality levels.
- 14. A computer program product arranged to perform the method according to any of the claims 1 to 8.
 - 15. A storage device comprising a computer program product according to claim 14.

- 16. A television set comprising a system according to any of the claims 9 to 13.
- 17. A set-top box comprising a system according to any of the claims 9 to 13.
- 18. A system for running an algorithm, comprising:

at least one memory capable of storing a first function of the algorithm, a second function of the algorithm, a plurality of output quality levels provided by the algorithm, a first plurality of quality level settings for the first function, and a second plurality of quality level settings for the second function; and

at least one processor capable of:

allocating a budget to the algorithm to enable operation of the algorithm at a selected output quality level, the selected output quality level comprising one of the plurality of output quality levels; and

assigning a first quality level of the first plurality of quality levels to the first function and assigning a second quality level of the second plurality of quality levels to the second function based on the selected output quality level.

- 19. The system of Claim 18, wherein the at least one memory is further capable of storing a hardware configuration file containing a hardware platform configuration of the system, the plurality of output quality levels based at least partially on the hardware configuration file.
- 20. The system of Claim 18, wherein the at least one memory is further capable of storing a software configuration file containing a software platform configuration of the system, the plurality of output quality levels based at least partially on the software configuration file.

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APPENDIX B

EVIDENCE APPENDIX

None

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APPENDIX C RELATED PROCEEDINGS APPENDIX

None